

What Is Claimed Is:

1. A sensor element constructed in layers, for detecting a  
5 physical property of a gas or a liquid, in particular for  
detecting the concentration of a gas component or the  
temperature of an exhaust gas of an internal combustion  
engine, having a first and a second layer (21, 22) and having  
at least one contact face (30),  
10 wherein the contact face (30) is disposed in a layer plane  
between the first and second layers (21, 22); and the first  
layer (21) includes a recess (40, 41, 42) in the region of the  
contact face (30).
- 15 2. The sensor element as recited in Claim 1,  
wherein the first and second layers (21, 22) are ceramic  
substrate layers, whose thickness is in the range from 0.05 to  
1 mm.
- 20 3. The sensor element as recited in Claim 1 or 2,  
wherein the recess (40, 41) extends in the region of the  
contact face (30) over the entire width of the sensor element  
(10).
- 25 4. The sensor element as recited in Claim 1 or 2,  
wherein the recess (42) is shaped in slotlike form.
5. The sensor element as recited in Claim 4,  
wherein the slotlike-shaped recess (42) widens toward the  
30 outer face of the sensor element (10).
6. The sensor element as recited in one of the preceding  
claims,  
wherein the contact face (30) is electrically connected to an  
35 electrical element, in particular an electrode or a heating  
element, via a conductor track (31); and the electrical  
element and the conductor track (31) are disposed inside the  
sensor element (10).

7. The sensor element as recited in Claim 6,  
wherein for electrical insulation, a first insulation layer  
(35) between the conductor track (31) and the first layer (21)  
and a second insulation layer (36) between the conductor track  
5 (31) and the second layer (22) are provided; the second  
insulation layer (36) is also provided between the contact  
face (30) and the second layer (22); and the first insulation  
layer (35) includes a recess in the region of the contact face  
(30).

10 8. The sensor element as recited in one of the preceding  
claims,  
wherein the contact face (30) is electrically connected to a  
contact part, so that the electrical element, via the  
15 conductor track (31), the contact face (30), and the contact  
part, is connected to an electrical wiring located outside the  
sensor element (10).

20 9. The sensor element as recited in one of the preceding  
claims,  
wherein the sensor element (10) includes both a third layer  
(23) and a further contact face, and the further contact face  
is disposed in the layer plane between the second and third  
layers; and the third layer (23), in the region of the further  
25 contact face, likewise includes a recess (41).

10. The sensor element as recited in one of the preceding  
claims,  
wherein the first layer (21) forms an outer layer of the  
30 sensor element (10).

11. The sensor element as recited in one of Claims 1 through  
9,  
wherein the sensor element (10), on the side of the first  
35 layer (21) remote from the contact face (30), includes at  
least one further layer; and the recess (40, 41, 42) is also  
provided in the further layer.

12. A method for producing a sensor element as recited in one of the preceding claims,  
wherein the recess is made in the green body of the ceramic sheet by being stamped out, by drilling, or by milling.